

September 23, 2001. Enclosed is a check in the amount of \$890 to cover the fee for the extension of time. Please charge any required extension-of-time fees not otherwise paid by check to Deposit Account No. 02-4467. A duplicate copy of this sheet is enclosed.

Please amend the application as follows:

IN THE CLAIMS

In accordance with amendment practice pursuant to Rule 1.121(c)(1)(i), presented below is a "clean" set of "rewritten claims." A "marked up" version of these claims is attached hereto as Exhibit 1 pursuant to Rule 1.121(c)(1)(ii).

B¹ 1. (Amended) A cellular vaccine against an infectious disease caused by an infectious agent comprising a bacterial carrier strain having a membrane vesicle of a microorganism integrated into the cell surface of the carrier strain, wherein the membrane vesicle comprises a bilayer and has an amount of an antigen associated with its surface, which antigen is produced by the microorganism from which the membrane vesicle is derived.

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Please cancel claim 4, without prejudice.

B² 6. (Amended) A vaccine as claimed in claim 1 which is effective against another infectious agent comprising a second bacterial carrier strain having a membrane vesicle of a microorganism integrated into the cell surface of the second carrier strain, wherein the membrane

vesicle comprises a bilayer and has an amount of an antigen associated with its surface, which antigen is produced by the microorganism from which the membrane vesicle is derived.

Please add the following claims:

18. A vaccine as claimed in claim 1 wherein the bacterial carrier strain is selected from the group consisting of *Shigella*, *Salmonella*, *Vibrio*, and *Escherichia*.

19. A vaccine as claimed in claim 18 wherein the bacterial carrier strain is *S. typhi* Ty21a or *S. typhimurium*.

20. A vaccine as claimed in claim 3 wherein the microorganism is selected from the group consisting of *Pseudomonas aeruginosa*, *Shigella flexneri*, *Shigella dysenteriae*, *Escherichia coli*, *Salmonella typhi*, *Neisseria gonorrhoeae* and combinations thereof.

21. A cellular vaccine comprising an avirulent or attenuated bacterial carrier strain having a membrane vesicle integrated into a cell wall of the carrier strain, the membrane vesicle having a bilayer and being derived from a pathogenic bacteria, wherein integration of the membrane vesicle with the cell wall of the carrier strain provides antigenic factors produced by the pathogenic bacteria to a surface of the bacterial carrier strain.